

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE NEBRASKA
PUBLIC SERVICE COMMISSION, ON ITS
OWN MOTION, SEEKING TO CONDUCT
AN INVESTIGATION INTO INTRASTATE
ACCESS CHARGES FOR RURAL ILECS

APPLICATION NO. NUSF-28

COMES NOW Qwest Corporation, and hereby provides the Nebraska Public Service
Commission with the following:

1. Direct Testimony of Scott A. McIntyre
2. Exhibits of Scott A. McIntyre:
 - a. Scott A. McIntyre – NUSF-17 (Exhibit No. 1)
 - b. Jeffrey H. Rohlfis – NUSF-17 (Exhibit No. 2)

Respectfully submitted on the 29th day of July, 2002.

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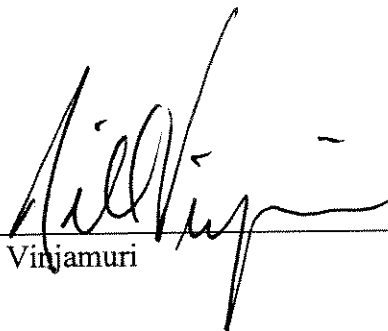
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A handwritten signature in black ink, appearing to read "Jill Vinjamuri", is written over a horizontal line. The signature is fluid and cursive.

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DIRECT TESTIMONY

SCOTT A. MCINTYRE

DIRECTOR – PRODUCT AND MARKET ISSUES

QWEST CORPORATION

JULY 29, 2002

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OF SCOTT A. MCINTYRE

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I. INTRODUCTION OF WITNESS

Q. PLEASE STATE YOUR NAME, TITLE AND ADDRESS.

A. My name is Scott A. McIntyre. I am employed by Qwest Corporation (Qwest) as Director – Product and Market Issues. My business address is Room 3009, 1600 7th Avenue, Seattle, WA, 98191.

Q. PLEASE REVIEW YOUR EDUCATION, WORK EXPERIENCE, AND PRESENT RESPONSIBILITIES.

A. I earned a Bachelor of Science degree in Electrical Engineering at the University of Washington in 1974. I have worked for Qwest (formerly U S WEST Communications, Inc. and before that, Pacific Northwest Bell) since 1970. In the past 32 years, I have held many positions that have given me a broad understanding of the telecommunications business. I have experience in the installation and repair of local residence and business telephone services. I also have experience in analyzing and planning new central office equipment and interoffice network facilities. I have performed cost analyses on many aspects of the business and analyzed departmental budgets in great detail. From 1987 to 1999, I managed private line voice and data products. This included the development, pricing and marketing for a wide range of products serving business customers across Qwest's fourteen-state region.

Since July 1999, I have been in my current position as a policy and pricing expert, representing Qwest on issues involving various services. I also represent Qwest on issues concerning competition and performance measures. This wide range of experience has provided me with an understanding of how services are provided, the pricing and marketing that support these services and the impacts of regulation and competition.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN NEBRASKA OR OTHER STATES IN QWEST'S TERRITORY?

1 A. Yes. Last year I testified in Application No. C-2112, the Nebraska Public Service
2 Commission ("Commission") investigation into payphone issues. Earlier this year, I
3 testified in support of Qwest's Local Service Freeze offering and in July of this year, I
4 testified in support of Qwest's proposal to lower intrastate switched access rates. I
5 have also testified on several different occasions in Oregon, Washington, Colorado,
6 Arizona, New Mexico, Utah, Wyoming, Iowa, and Minnesota.

7 8 **II. PURPOSE OF TESTIMONY**

9
10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. The purpose of my testimony is to explain Qwest's position as it relates to the
12 Commission's investigation in this docket concerning rural Independent Local
13 Exchange Company ("ILEC") switched access rates. Qwest believes that the FCC has
14 moved and will continue to move in a direction that significantly reduces interstate
15 access charges. The FCC has directly addressed removing implicit support for local
16 service from access rates at the interstate level. Qwest believes that states should stay
17 consistent with FCC policies and direction to reduce the opportunity for arbitrage,
18 enhance the competitive landscape and reduce consumer confusion. To this end,
19 Qwest supports the reduction of ILEC switched access rates on a revenue neutral
20 basis to the degree that they contain revenue contribution that is better recovered
21 through local exchange rates, explicit surcharges and/or universal service funds.
22 Eliminating archaic rate structures will benefit consumers by providing a rational and
23 sound investment platform for competitors to offer new and improved services. These
24 new and improved services should be based on quality and cost savings to customers
25 rather than arbitrage or niche opportunities that cannot survive in the long run.

26
27 **Q. WHAT IS QWEST'S APPROACH TO ACCESS CHARGES FOR**
28 **RURAL ILECS AND UNIVERSAL SERVICE?**

1 A. Qwest's position in this case is grounded in the federal¹ and state² statutes
2 that specify the purpose of universal service funds. In particular, the
3 federal Telecommunications Act of 1996 ("Act") states that rates and
4 access for rural consumers should be comparable to urban consumers.

5
6 **III. COMMISSION QUESTIONS**

7
8 **Q. (2a) SHOULD THE COMMISSION, FOR PURPOSES OF STATE ACCESS**
9 **CHARGES, ADOPT THE INTERSTATE ACCESS RATE STRUCTURE**
10 **AND/OR RATE LEVELS FOR RURAL ILECS?**

11 A. Qwest believes that the Commission should adopt the FCC rate levels for all Local
12 Exchange Companies ("LECs"). In Docket NUSF-17, I provided testimony relating
13 specifically to Qwest, in terms of the problems created by differences between
14 interstate and intrastate access charges. These same problems potentially exist for any
15 LEC. Briefly, eliminating the rate differences between interstate and intrastate access
16 services will address these problems by:

- 17 1) Reducing the incentive for uneconomic bypass of the switched network;
18 2) Removing economic penalties for carriers that rate average their toll plans;
19 3) Reducing the confusion to customers who have to deal with many rate plans
20 driven by a wide variety of switched access rates;
21 4) Eliminating toll usage-rated support for end-user Non-Traffic Sensitive ("NTS")
22 flat-rated costs;
23 5) Eliminating the hidden support that all users of the network pay, but in various

¹ 1996 Telecommunications Act of 1996, Section 254 (b)(3) ACCESS IN RURAL AND HIGH COST AREAS- Consumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.

² Nebraska Statute 86-1402: Purpose of Act. The purpose of the Nebraska Telecommunications Universal Service Fund Act is to authorize the commission to establish a funding mechanism which supplements federal universal service support mechanisms and ensures that all Nebraskans, without regard to their location, have comparable accessibility to telecommunications services at affordable prices.

1 and incalculable ways; and,

2 6) Providing balanced support for universal service at both the interstate and
3 intrastate levels.

4
5 **Q. WOULD YOU PLEASE EXPLAIN EACH OF THESE PROBLEMS MORE**
6 **FULLY?**

7 **A.** Yes.

8 1) Reduce the Incentive for Uneconomic Bypass of the Switched Network.

9 Uneconomic bypass often occurs when service providers bypass the switched
10 network with dedicated facilities. These facilities are attractive because switched
11 access rates are relatively high. To the degree that these bypass facilities carry
12 local traffic, they merely represent a competitive alternative. To the degree that
13 they carry toll traffic, they bypass switched access and therefore bypass the
14 support for local service that is built into current rates. The crossover point
15 between paying switched access rates and providing dedicated bypass facilities
16 shifts toward bypass the higher the switched access rates are. These dedicated
17 facilities are typically not used to as great a capacity as they would be if utilized as
18 part of the switched network. This creates wasted capacity and the cost of this
19 waste is borne in one way or another by all ratepayers. In the simplest sense,
20 those bypassing the network (or a portion of it) no longer contribute to the cost of
21 that network and therefore the cost is borne solely by those not bypassing the
22 network. Lower switched access rates mean that more service providers and
23 customers will utilize the switched network. The switched network, in turn,
24 becomes more efficient the more it is used.

25
26 2) Remove Economic Penalties for Carriers that Rate Average their Toll Plans.

27 Even though intrastate access rates differ from interstate rates, or differ from state
28 to state, or from LEC to LEC, interexchange carriers must price rates to cover
29 costs in the aggregate. This means that if one state or LEC has higher than
30 average switched access rates, the carrier will have to decide whether to create a

1 specific rate plan for that area or accept lower contribution. Specific rate plans
2 cost more to manage and accepting lower contribution is also a form of cost that
3 must be absorbed. In either case, the carrier may choose to withhold some
4 services in that area or create higher priced plans. The customer pays the price for
5 this inefficiency.
6

7 3) Reduce the Confusion to Customers who Have to Deal with Many Rate Plans
8 Driven by a Wide Variety of Switched Access Rates.

9 To the degree that carriers choose to address the variety of widely different
10 switched access rate structures with widely different toll rate plans, customer
11 confusion is multiplied. There are enough marketing reasons to create multiple
12 rate plans without adding the complexity of widely different switched access rates
13 to the mix.
14

15 4) Eliminate Toll Usage-Rated Support for End-User Non-Traffic Sensitive ("NTS")
16 Flat-Rated Costs.

17 Currently, toll customers are paying more through higher toll rates caused by
18 higher switched access rates than the actual cost of the resources used. Those who
19 use more toll services pay disproportionately more because toll and the underlying
20 switched access rates are driven by minutes of use rather than a flat rate. The
21 underlying cause of these higher rates was driven initially by a usage-based
22 recovery of flat rated NTS costs. A sound economic structure is the basis for a
23 sound competitive environment and the structure will not be sound as long as
24 customers are receiving more or less than they are paying for.
25

26 5) Eliminate the Hidden Support that All Users of the Network Pay, but in Various
27 and Incalculable Ways.

28 Since switched access rates are higher than they need to be in a fully competitive
29 environment, carriers will choose to pass on these uneconomic costs in a variety
30 of ways. Since the rates vary from jurisdiction to jurisdiction, different carriers

1 will recover these costs in a variety of ways. Some may charge urban customers
2 more because they are perceived to have more ability to pay. Some may charge
3 urban customers less because there is more competition. Some may have more
4 rate plans to address these variations. In any case, the cost recovery mechanism is
5 hidden from the ultimate consumer. Because of this, consumers will have a
6 difficult time making sound choices between providers. There are enough
7 differences between providers because of size, service area, and marketing
8 approach already. Adding the complexity of how to recover for higher than
9 necessary switched access costs adds to the fact that these costs are not paid by the
10 cost-causer.

11
12 6) Provide Balanced Support for Universal Service at Both the Interstate and
13 Intrastate Levels.

14 To the degree that current intrastate toll traffic is being disguised as interstate
15 traffic to utilize lower access rates, the revenue from that traffic generates
16 increased support for the interstate universal service fund to the detriment of the
17 Nebraska universal service fund ("NUSF"). Reducing the differences that cause
18 traffic to be disguised purifies the support mechanisms for both funds.

19
20 **Q. (2b) DOES THE EXISTING STATE ACCESS CHARGE STRUCTURE**
21 **AND/OR RATE LEVELS FOR RURAL ILECS CONTAIN IMPLICIT**
22 **SUBSIDIES? IF SO, HOW CAN THE IMPLICIT SUBSIDIES BE**
23 **IDENTIFIED AND MEASURED?**

24
25 A. Generally the only rate element that represents pure implicit subsidy is the Carrier
26 Common Line ("CCL") charge. Beyond the CCL, there can be great debate as to
27 whether rural ILECs' current intrastate switched access charges contain implicit
28 subsidies. In order for a subsidy to exist, there must be services offered below cost.
29 Services offered below cost are relatively easy to identify. Rates that are below the
30 incremental cost to provide the service will generate insufficient revenues to support

1 the offering of that service. Finding the service or services that are providing the
2 missing support is not nearly so clear.

3
4 In some instances, stand-alone cost studies can be used to determine if a service is
5 providing implicit support for other services. The real-world application of this
6 theory, however, is complex and not helpful in this situation. In fact, services offered
7 at prices above stand-alone cost may indeed provide subsidy support, but other
8 services offered below stand-alone cost may provide such support as well. Stand-
9 alone cost studies are complex in terms of what elements to include and how to
10 apportion costs in a "what if this were a stand-alone service" scenario. In the end,
11 such studies won't offer complete solutions or empirical answers to the subsidy
12 question in this case.

13
14 The key to understanding subsidies in switched access rates is to understand the
15 historical public policy justifications for the pricing of this service. Higher than
16 otherwise reasonable switched access rates have been supported in the public policy
17 arena to help keep basic exchange rates low. In this regard, there is a public policy
18 generated, implicit subsidy contained in switched access rates that is represented by
19 the difference between the existing rate and the rate one would normally expect the
20 service to support. In the current environment, the "expected" rate would likely be the
21 FCC rate. This means that revenues generated by intrastate access rates that are in
22 excess of what interstate rates would generate, could be considered a form of public
23 policy generated, implicit support for basic exchange services.

24
25 **Q. WHY WOULD YOU USE THE FCC RATE AS THE BENCHMARK BY**
26 **WHICH TO MEASURE THIS "SUBSIDY"?**

27 A. The FCC rate should be used as such a benchmark because in today's environment,
28 the FCC rate is a surrogate for a "market rate." While the FCC rate is not a true
29 market rate in that it has not been established by market forces alone, the FCC has
30 worked to remove implicit subsidies and has created a rate that is the most commonly

1 used rate in the country. It affects all providers of interstate services and is the best
2 surrogate for a true market rate at this time. In addition, in order to reduce the
3 problems associated with disparate access rates, matching the FCC rate is the best and
4 easiest way to accomplish that goal. This makes it the most practical surrogate for a
5 true market rate and that makes it a good benchmark to measure the implicit, policy
6 generated subsidy included in access rates. If not for state public policy issues, the
7 FCC rate would likely be matched at the state level.

8
9 **Q. (3) THE COMMISSION BELIEVES THAT WHEN SIMILAR SERVICES**
10 **ARE PRICED IN A SIGNIFICANTLY DIFFERENT MANNER AND LEVEL,**
11 **PERVERSE INCENTIVES ARE CREATED. TO AVOID THIS SITUATION,**
12 **IF THE COMMISSION WOULD ADOPT A STATE ACCESS CHARGE**
13 **STRUCTURE OR RATE LEVELS THAT IS DIFFERENT FROM THE**
14 **INTERSTATE JURISDICTION FOR RURAL ILECS, HOW CAN THE**
15 **COMMISSION ENSURE THAT ACCESS USAGE IS REPORTED AND**
16 **BILLED CORRECTLY?**

17 A. As a practical matter, it cannot. There are too many ways that intrastate access traffic
18 can be confused with interstate traffic. At some level this may be intentional, but it
19 can also be inadvertent. There are many legitimate ways to consolidate traffic and the
20 efficient use of facilities makes this economically advantageous. When local service
21 providers, customers and interexchange carriers are all involved in trying to make
22 efficient use of facilities, the probability that jurisdictional confusion will occur is
23 high. A mismatch in interstate and intrastate access rates will always create an
24 incentive to misreport the true jurisdiction of traffic.

25
26 **Q. (4a) SHOULD ANY PORTION OF LOOP COST RECOVERY**
27 **INCORPORATED IN THE CCL RATE ELEMENT, IN THE RURAL ILEC**
28 **ACCESS CHARGE STRUCTURE, BE SHIFTED TO AN NUSF**
29 **COMPONENT?**

30 A. Possibly. Qwest agrees with the proposition that is implicit in the question: any

1 reduction in access charges should be accomplished on a revenue neutral basis. As to
2 whether any portion of loop cost recovery incorporated in the CCL rate element, in
3 the rural ILEC access charge structure, should be shifted to an NUSF component ,
4 Qwest maintains that the NUSF should be used to provide support for high cost rural
5 services. To the degree that rural LECs can demonstrate that their costs are higher
6 than can be supported by the Commission's benchmark rates, this difference could be
7 eligible for NUSF support.

8
9 Loop costs, specifically, are NTS costs. This means that the cost of the loop does not
10 vary with usage. While the use of the NUSF to support NTS costs is an improvement
11 over the current structure, it is not the best way to support these costs. Because NTS
12 costs are flat-rated and do not vary with usage, it is better to provide this support
13 through a flat-rated charge than it is to provide support from the NUSF, which has a
14 usage component.

15
16 In NUSF-17, Qwest has proposed a statewide, flat-rated Intrastate Subscriber Line
17 Charge (ISLC) as an alternative to NUSF support.

18
19 **Q. WHY DOES QWEST BELIEVE A FLAT-RATED INTRASTATE**
20 **SUBSCRIBER LINE CHARGE IS APPROPRIATE?**

21 A. For the long term, access rate reductions are more appropriately recovered through
22 implementation of an ISLC, rather through NUSF support. The NUSF should be used
23 to support lower prices for high cost areas. The ISLC is a flat rate charge attributed to
24 the customer, who is the user of the loop. It is competitively neutral and is
25 sustainable as a long-term method of recovering this support because it recovers NTS
26 costs associated with the service being provided to the ISLC customers.

27
28 **Q. WHY SHOULD ACCESS CHARGE RESTRUCTURES BE REVENUE**
29 **NEUTRAL?**

30 A. The pricing restructure being addressed here is largely driven by public policy and the

1 need to establish competitively neutral pricing platforms. As the telecommunications
2 market becomes more and more competitive, it is important to eliminate many of the
3 pricing policies of the past 100 years. This will allow for robust competition without
4 pricing anomalies that confuse customers and generate inefficient investment.
5 Revenue neutrality insures that companies are not penalized for the progressive
6 restructuring of rates that are in the long term best interests of competition and
7 consumers. In theory, this restructure will be revenue neutral to consumers as a
8 whole, so it should also be revenue neutral to the carriers as well.
9

10 **Q. WHY IS IT INAPPROPRIATE TO USE THE NEBRASKA UNIVERSAL**
11 **SERVICE FUND TO OFFSET ALL SWITCHED ACCESS REDUCTIONS ON**
12 **A GOING FORWARD BASIS?**

13 A. By creating an offset through the NUSF, a new implicit funding mechanism is
14 created. The historical justification for higher than otherwise reasonable switched
15 access rates is the desire to support the NTS portion of local service. The NTS
16 portion, or loop portion of local service is flat rated. Loop costs do not vary with
17 usage, so two loops of the same configuration cost the same regardless of how the
18 customers use them. The USF in Nebraska is a surcharge based on revenue. This
19 means that customers that use more telecommunications services and pay more for
20 that service, contribute more into the fund than those who use these services to a
21 lesser degree. While this is a practical way of supporting rural high cost services, it
22 distorts the concept of flat rated support for flat rated loop costs. It means that some
23 customers are paying more to support NTS loop costs, which are flat rated, than other
24 customers. In this sense, a new implicit subsidy has been created. By shifting
25 switched access rates to the NUSF, the implicit subsidy for local service has been
26 shifted from carriers to high usage customers. While this is a better, less punitive
27 form of subsidy than higher access rates, it is not the best long-term solution for
28 rationalizing switched access rates.
29

30 **Q. IF THE NUSF FUNDING WERE FLAT RATED WOULD THE NUSF BE**

APPROPRIATE FOR THIS PURPOSE?

A. No. Creating a flat rated funding mechanism for the NUSF would certainly address one major problem with using this fund as an offset for reduced switched access rates. If this were done however, passing these funds through the NUSF would become unnecessary. If such a flat rated charge were established, there would be no need to pass this funding through the NUSF. It would be far more efficient to just allow a local service provider to collect this charge directly.

Q. HAS THE FCC SHIFTED ITS PUBLIC POLICY CONCERNING HIGH CONTRIBUTION IN SWITCHED ACCESS RATES?

A. Yes. Over the past several years, the FCC has reduced interstate switched access rates and increased the End User Common Line (EUCL) charge. This has effectively transferred the local service support from switched access rates to the EUCL charge. These charges are flat rate charges applied on a per line basis. This has shifted local service support paid by carriers through switched access rates back to end users, where it should be.

Q. IS A STATEWIDE, FLAT-RATED SUBSCRIBER LINE CHARGE CONSISTENT WITH THIS NEW FCC POLICY?

A. Yes. Combining intrastate switched access reductions with corresponding revenue neutral offsets is consistent with the action and direction of the FCC in its Intercarrier Compensation docket and, specifically, in its *MAG*³ and *CALLS*⁴ Orders. Qwest believes that interstate switched access will continue to decline as the FCC moves closer to a bill and keep regime for all intercarrier compensation. Qwest supports

³ *Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers*, CC Docket NO. 00-256, Second Report and Order and Further Notice of Proposed Rulemaking, *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Fifteenth Report and Order, *Access Charge Reform for Incumbent Local Exchange Carriers Subject to Rate-of-Return Regulation*, CC Docket No. 98-77, Report and Order, *Prescribing the Authorized Rate of Return From Interstate Services of Local Exchange Carriers*, CC Docket No. 98-166, Report and Order, released November 8, 2001.

⁴ *Access Charge Reform*, CC Docket No. 96-262, Sixth Report and Order, 15 FCC Rcd 12962 (2000) (*CALLS Order*)

1 moving to bill and keep and has stated such in its comments filed with the FCC in the
2 Intercarrier Compensation Docket.

3
4 **Q. (4b) SHOULD ANY PORTION OF THE RECOVERY OF THE RURAL**
5 **ILECS' LOCAL SWITCHING COSTS INCORPORATED IN THE LOCAL**
6 **SWITCHING ACCESS CHARGE ELEMENT, IN THE RURAL ILEC**
7 **ACCESS CHARGE STRUCTURE, BE SHIFTED TO AN NUSF**
8 **COMPONENT?**

9 A. Possibly. Qwest agrees with the proposition that is implicit in the question: any
10 reduction in access charges should be accomplished on a revenue neutral basis. As to
11 whether any portion of the local switching costs incorporated in the local switching
12 access rate element should be shifted to an NUSF component, Qwest maintains that
13 the NUSF should be used to provide support for high cost rural services. To the
14 degree that rural LECs can demonstrate that their costs are higher than can be
15 supported by the Commission's benchmark rates, this difference could be eligible for
16 NUSF support. This assumes that the NTS portion of local service (the loop) has
17 already been addressed separately.

18
19 **Q. (4c) SHOULD ANY PORTION OF THE RECOVERY OF TRANSPORT**
20 **COSTS ASSOCIATED WITH THE TIC RATE ELEMENT, IN THE RURAL**
21 **ILEC ACCESS CHARGE STRUCTURE, BE SHIFTED TO AN NUSF**
22 **COMPONENT?**

23 A. Possibly. Qwest agrees with the proposition that is implicit in the question: any
24 reduction in access charges should be accomplished on a revenue neutral basis. As to
25 whether any portion of the transport costs associated with the TIC rate element should
26 be shifted to an NUSF component, Qwest maintains that the NUSF should be used to
27 provide support for high cost rural services. To the degree that rural LECs can
28 demonstrate that their costs are higher than can be supported by the Commission's
29 benchmark rates, this difference could be eligible for NUSF support. This assumes
30 that the NTS portion of local service (the loop) has already been addressed separately.

1

2 **Q. (4d) SHOULD ANY PORTION OF ANY OTHER RURAL ILEC ACCESS**
3 **CHARGE ELEMENT BE SHIFTED TO AN NUSF COMPONENT?**

4 A. Possibly. The NUSF should be used to provide support for high cost rural services. To
5 the degree that rural LECs can demonstrate that their costs are higher than can be
6 supported by the Commission's benchmark rates, this difference could be eligible for
7 NUSF support. This assumes that the NTS portion of local service (the loop) has
8 already been addressed separately.

9

10 **Q. (4e) SHOULD ANY REDUCTIONS IN RURAL ILEC ACCESS CHARGES BE**
11 **RECOVERED THROUGH INCREASES IN BASIC RATES INSTEAD OF**
12 **THROUGH NUSF SUPPORT?**

13 A. Possibly. The first requirement should be that the ILEC is charging the Commission's
14 established basic exchange benchmark rate. Once this requirement has been met, the
15 Commission can examine whether higher basic exchange rates are warranted. The
16 Commission can weigh the benefits of reduced access charges versus the impact of
17 basic exchange increases and the history of specific basic exchange rate changes in
18 prior years. The Commission may also consider Qwest's proposal in NUSF-17 to
19 create an ISLC charge. The creation of an ISLC may be easier for customers to
20 understand in that it represents a direct shift of revenue support from switched access
21 to a distinct and specific end user charge. The ISLC reminds customers over time of
22 what shift in rate structure has occurred and allows them to compare the charge with
23 expected reductions in long distance rate reductions. The ISLC also allows the
24 Commission to manage how this charge is applied separately, as opposed to burying
25 this support shift in basic exchange rates.

26

27 Qwest acknowledges that the Commission determined in NUSF-17 that the proposal
28 of the implementation of an ISLC was beyond the scope of that proceeding and that
29 the Commission may take up the investigation of those issues in a later proceeding.

30 Qwest respectfully suggests that the Commission may now wish to consider Qwest's

1 proposal, as filed on June 7, 2002 in NUSF-17, to create an ISLC charge. Exhibit
2 SAM-1 to this testimony contains the testimony filed in that docket by myself and Mr.
3 Jeffrey Rohlf, outlining Qwest's ISLC proposal.
4

5 **Q. (5) THEREFORE, IN THE EVENT THAT A CMRS PROVIDER SEEKS TO**
6 **DRAW SUPPORT FROM THE NUSF, CAN AND SHOULD THE**
7 **COMMISSION, AS A PREREQUISITE TO THE RECEIPT OF NUSF**
8 **SUPPORT, REQUIRE CMRS PROVIDERS TO EITHER CHARGE THE**
9 **ACCESS RATES OF THE COMPETING ILEC OR DEMONSTRATE THAT**
10 **ITS ACCESS RATES ARE COST-BASED ON THOSE LINES FOR WHICH**
11 **THEY RECEIVE SUPPORT?**

12 **A.** NUSF support should only be provided to the degree that the provider can
13 demonstrate that their costs to serve rural customers are higher than their costs to
14 serve their urban customers. Universal service support is intended to support the high
15 costs of an efficient carrier, it is not intended to support high cost technologies or high
16 cost providers of service. It is intended to make services available to customers in
17 rural areas that are available to customers in urban areas at similar costs. CMRS
18 providers should be eligible for such support under the same terms and conditions of
19 the ILEC, including bringing rates to the benchmark level, but not to the competitive
20 disadvantage of other providers.
21

22 **Q. (6) GIVEN THE EXISTING MARKET CONDITIONS OF MEASURED TOLL**
23 **SERVICE, IS THE REQUIREMENT TO FLOW-THROUGH ACCESS**
24 **CHARGE REDUCTIONS STILL APPROPRIATE? TO WHAT EXTENT**
25 **SHOULD AN INTEREXCHANGE CARRIER THAT DEMONSTRATES TO**
26 **THE COMMISSION'S SATISFACTION THAT ITS MTS RETAIL PRICE IS**
27 **BELOW ITS COST FOR ACCESS SERVICE BE REQUIRED TO FLOW-**
28 **THROUGH ANY ACCESS CHARGE REDUCTIONS IT MAY RECEIVE?**

29 **A.** The flow-through of access charge reductions should not be a regulatory mandate.
30 Sufficient competition exists such that market forces will pressure toll providers to

1 flow-through access reductions. Moreover, there are many complexities in offering
2 toll plans that make mandatory flow-through difficult to administer, at best.

3
4 **Q. (7) WHAT BENEFITS, IF ANY, CAN THE COMMISSION REASONABLY**
5 **EXPECT CONSUMERS TO REALIZE FROM FURTHER REDUCTIONS IN**
6 **RURAL ILEC ACCESS CHARGES? IN THIS REGARD, HOW CAN THE**
7 **COMMISSION VERIFY THAT ANY ACCESS CHARGE REDUCTIONS**
8 **REQUIRED OF RURAL ILECS WILL BE FLOWED THROUGH TO**
9 **NEBRASKA CONSUMERS?**

10 **A.** The benefits to consumers will come in the form of simpler, easier to understand
11 pricing, new products and services and more competitive alternatives. Competitors
12 are reluctant to invest when the pricing for services is based on arbitrary support
13 mechanisms for other services. They are fearful that if public policies change, their
14 investments may be stranded. Rational, cost based services with prices that fully
15 support the service being offered, allow competitors to enter the market with a sound
16 business plan and the understanding that while business risks still exist, the policies of
17 pricing services are sound and will survive the long term. The telecommunications
18 industry is a high investment industry and encouraging investment is important to
19 competitive growth. The risks of such investment should not include policy changes
20 in the future that could adversely affect the business opportunities of today.
21 The response to question six, above addresses the issue of the flow through of access
22 reductions, which should be left to the competitive market to regulate.

23
24 **IV. CONCLUSION**

25
26 **Q. PLEASE SUMMARIZE QWEST'S PROPOSED PLAN FOR SWITCHED**
27 **ACCESS.**

28 **A.** Qwest supports the principle expressed by the Commission in its January 13, 1999
29 Order in docket C-1628, that "the state access charge structure should approximate

1 the interstate access charge structure as detailed in this Order". With issuance of the
2 CALLS and MAG orders, the FCC has taken significant steps toward restructuring
3 interstate switched access rates through a reduction of interstate switched access
4 charges and the imposition of an end-user subscriber line charge. It is Qwest's
5 position and belief that inter-carrier compensation will transition to a "Bill and Keep"
6 regime in which access charges, as we know them today, will have little impact in
7 future compensation between service providers.

8
9 As we move toward Bill & Keep, state commissions should keep step with the FCC
10 so that a rational rate structure is in place as the industry continues making changes
11 concerning inter-carrier compensation. To this end, affecting changes in how rural
12 ILECs charge for switched access will help protect consumers from unexpected large
13 rate increases as the industry evolves. Using the FCC tariff structure and rates as a
14 reasonable benchmark, requiring all service providers to move closer to that
15 benchmark, including the introduction of an intrastate subscriber line charge, will
16 serve consumers well in the long run.

17
18 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

19 **A.** Yes it does.

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE NEBRASKA
PUBLIC SERVICE COMMISSION, ON ITS
OWN MOTION, SEEKING TO CONDUCT
AN INVESTIGATION INTO INTRASTATE
ACCESS CHARGES FOR RURAL ILECS

APPLICATION NO. NUSF-28

EXHIBITS OF

SCOTT A. MCINTYRE

DIRECTOR – PRODUCT AND MARKET ISSUES

QWEST CORPORATION

July 29, 2002

INDEX OF EXHIBITS

<u>Description</u>	<u>Exhibit</u>
Scott A. McIntyre's Direct Testimony - NUSF-17	1
Jeffrey H. Rohlf's, Direct Testimony - NUSF-17	2

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE NEBRASKA
PUBLIC SERVICE COMMISSION, ON ITS
OWN MOTION, SEEKING TO
DETERMINE ACCESS COSTS FOR U S
WEST (N/K/A QWEST CORPORATION)

APPLICATION NO. NUSF-17

DIRECT TESTIMONY

SCOTT A. MCINTYRE

DIRECTOR – PRODUCT AND MARKET ISSUES

QWEST CORPORATION

JUNE 7, 2002

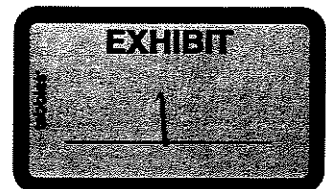


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FOR THE DIRECT TESTIMONY
OF SCOTT A. MCINTYRE

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1 **I. EXECUTIVE SUMMARY**

2
3 This testimony is in response to the Nebraska Public Service
4 Commission's Order issued May 17, 2002, to determine whether the
5 implementation of the Transition Plan filed in this proceeding would
6 constitute the removal of Qwest's implicit subsidies from its switched
7 access charges pursuant to the Commission's decision in C-1628. Qwest
8 appreciates the continued opportunity to provide the Commission with its
9 position on these very important and complex issues.

10
11 In its April 30, 2002 Transition Plan filing, Qwest proposed to further
12 restructure switched access by reducing intrastate switched access an
13 additional \$6.1 million on a revenue neutral basis through a proportionate
14 offset from the Nebraska Universal Service Fund (NUSF). While that is
15 still a workable plan, Qwest is offering with this testimony, a modified
16 proposal that includes a different restructure mechanism that is more
17 economically sound on a long-term basis. This new mechanism will
18 accomplish the switched access restructure goals of the plan while adding
19 a layer of long-term economic health to the underlying rate structure in
20 Nebraska.

21
22
23 **II. BACKGROUND**

24
25 The Commission opened docket C-1628 on September 15, 1997 to
26 investigate the structure of intrastate switched access charges and to
27 establish a Nebraska Universal Service Fund (NUSF). In its January 13,
28 1999 Order, the Commission concluded that, *where necessary*, implicit
29 subsidies should be replaced with explicit support from the NUSF to

1 ensure that all Nebraskans, without regard to location, have comparable
2 accessibility to telecommunications services at affordable prices.

3
4 In support of the Commission's overall objectives and direction in this
5 docket, as well as docket C-1628, Qwest has removed the clearly
6 identifiable subsidies that had in the past been collected through switched
7 access charges. (See Qwest's Comments filed December 2, 1999 in
8 NUSF-17 and Qwest Witness Lanphier Testimony filed December 15,
9 2000 in C-1628). Qwest restructured its switched access local transport
10 charges to bring the Nebraska transport charge structure into consistency
11 with the interstate structure. The transport restructure was accomplished
12 in two steps, on March 18 and September 1, 1999. While performing the
13 transport restructure, roughly \$10 million in contribution was removed
14 from the transport charges and added to the common line (CCL) charges.
15 On September 1, 1999, Qwest completely eliminated its CCL charges, thus
16 reducing its intrastate switched access charges by over \$21.6 million.
17 Accordingly, Qwest has eliminated the clear source of implicit subsidy in
18 its intrastate switched access rates.

19

III. INTRODUCTION OF WITNESS

Q. PLEASE STATE YOUR NAME, TITLE AND ADDRESS.

A. My name is Scott A. McIntyre. I am employed by Qwest Corporation (Qwest) as Director – Product and Market Issues. My business address is Room 3009, 1600 7th Avenue, Seattle, WA, 98191.

Q. PLEASE REVIEW YOUR EDUCATION, WORK EXPERIENCE, AND PRESENT RESPONSIBILITIES.

A. I earned a Bachelor of Science degree in Electrical Engineering at the University of Washington in 1974. I have worked for Qwest (formerly U S WEST Communications, Inc. and before that, Pacific Northwest Bell) since 1970. In the past 32 years, I have held many positions that have given me a broad understanding of the telecommunications business. I have experience in the installation and repair of local residence and business telephone services. I also have experience in analyzing and planning new central office equipment and interoffice network facilities. I have performed cost analyses on many aspects of the business and analyzed departmental budgets in great detail. From 1987 to 1999, I managed private line voice and data products. This included the development, pricing and marketing for a wide range of products serving business customers across Qwest's fourteen-state region.

Since July 1999, I have been in my current position as a policy and pricing expert, representing Qwest on issues involving various services. I also represent Qwest on issues concerning competition and performance measures. This wide range of experience has provided me with an understanding of how services are provided, the pricing and marketing that support these services and the impacts of regulation and competition.

Q. HAVE YOU PREVIOUSLY TESTIFIED IN NEBRASKA OR OTHER STATES IN QWEST'S TERRITORY?

1 A. Yes. Last year I testified in Application No. C-2112, the Nebraska Public Service
2 Commission (Commission) investigation into payphone issues. More recently I
3 testified earlier this year in support of Qwest's Local Service Freeze offering. I have
4 also testified on several different occasions in Oregon, Washington, Colorado,
5 Arizona, New Mexico, Utah, Wyoming, Iowa, and Minnesota.

6

7

8

IV. PURPOSE OF TESTIMONY

9

10 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

11 A. The purpose of my testimony is to explain Qwest's proposal in response to the
12 Commission's Order issued May 17, 2002. I will explain Qwest's Transition Plan
13 filed April 30, 2002 and propose an adjustment to the plan that Qwest believes
14 promotes a healthier long-term rate structure.

15

16 Even though Qwest has removed the clearly identifiable subsidies that had previously
17 been collected through intrastate switched access charges, Qwest believes that further
18 reductions in intrastate switched access rates are necessary in order to further the
19 Commission's stated goal of moving the state switched access charge structure toward
20 the interstate switched access structure and to further the overall policy goal of
21 establishing appropriate economic pricing.

22

23 In this testimony, I will describe how further switched access restructuring can be
24 accomplished on a revenue neutral basis though implementation of a competitively
25 neutral Intrastate Subscriber Line Charges (ISLC) for each residential and business
26 line, rather than through NUSF support, as previously proposed in our April, 2002
27 Transition Plan filing.

28

29

1 **V. POLICY GOALS SUPPORTING FURTHER**
2 **SWITCHED ACCESS RESTRUCTURE**
3

4 **Q. WHY IS FURTHER INTRASTATE SWITCHED ACCESS**
5 **RESTRUCTURING NECESSARY?**

6 A. Beyond the removal of subsidies, reducing switched access charges will benefit the
7 emerging competitive landscape of telecommunications. Qwest believes that
8 restructuring switched access is one vital step toward the broader policy goal of
9 establishing appropriate economic pricing, at both the federal and state levels, for
10 retail products and services, intrastate and interstate switched access, unbundled
11 network elements and interconnection. Appropriate economic pricing promotes
12 capital investment and drives market behavior that enhances competition, ultimately
13 benefiting consumers.

14
15 As Qwest made clear in its intercarrier compensation comments currently pending
16 before the Federal Communications Commission (FCC)¹, the public policy goal for
17 intercarrier compensation, including switched access, should be a simple, predictable,
18 and market-oriented regime that applies to any hand-off of traffic on the public
19 switched network. To that end, Qwest proposes a unified bill-and-keep regime for
20 intercarrier compensation, under which each carrier would recover from its end users
21 the costs of its own access facilities, including the costs of its loops and of the
22 terminating switching functions, including both tandem and local switching. Until we
23 achieve that unified, simple, predictable, structure, the industry will continue to
24 misapply investment. When competitors are faced with an underlying rate structure
25 that drives unsound investments, they either make those investments, knowing that
26 the rules are subject to change, but hoping that they will not change significantly, or
27 they will choose not to invest at all. In either case, consumers are prevented from the

¹ *In the Matter of Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92. See, Comments of Qwest Communications International, Inc. filed August 21, 2001 and Reply Comments of Qwest Communications International, Inc. filed November 5, 2001. (Copies Attached.)

1 benefits of fair competition.

2
3 The current patchwork of intercarrier compensation mechanisms, including switched
4 access, are based on pre-divestiture and pre-Telecommunications Act regulatory
5 schemes that no longer further the policies of recent law or this Commission. They
6 reflect and reinforce artificial distinctions among carriers, customers and services, and
7 create unavoidable opportunities for economically irrational, regulation-driven
8 arbitrage.

9
10 **Q. WILL CONSUMERS BENEFIT FROM THE PROPOSED SWITCHED**
11 **ACCESS REDUCTIONS?**

12 A. Yes. Since the intrastate toll market is highly competitive, it is reasonable to assume
13 that toll providers will pass through intrastate switched access reductions in the form
14 of lower toll rates. Competitive pressures, rather than additional regulation, should be
15 allowed to drive those reductions to customers. The reductions could save Nebraska
16 customers up to \$6 million in toll rates..

17
18
19 **VI. SUBSIDIES AND SWITCHED ACCESS**

20
21 **Q. ARE THERE STILL SUBSIDIES IN QWEST'S CURRENT INTRASTATE**
22 **SWITCHED ACCESS RATES?**

23 A. From Qwest's perspective, the clearly identifiable subsidies have been removed from
24 intrastate switched access rates. This is certainly a debatable issue, however,
25 depending upon how one defines the factors that determine whether subsidies exist.
26 Applicable costs are certainly one area that has been and will be argued from various
27 perspectives and without a clearly agreed upon cost base, subsidies can not be clearly
28 quantified. In any case, the restructuring of switched access should be continued even

1 if quantification of subsidies or their very existence is not agreed upon. Too much
2 consideration of subsidies will only divert attention from the real goal of access
3 restructure which is establishing a rate structure that is sustainable in a fully
4 competitive telecommunication market.

5
6 While the Commission began this restructuring program to eliminate implicit
7 subsidies, it should continue the restructuring effort even if the subsidy issue remains
8 unresolved. Once access is fully restructured and priced at competitively neutral
9 rates, the issue of subsidies in switched access rates will become moot.

10
11 **Q. WHAT DOES THE HISTORY OF SWITCHED ACCESS RATES HAVE TO**
12 **DO WITH THE EXISTENCE OF CURRENT SUBSIDIES?**

13 **A.** When switched access rates were first created, with the divestiture of the Bell System,
14 they included more contribution than would have been normal from a market
15 perspective. Prior to the divestiture of the Bell System, and the proliferation of
16 competition in the long distance market, long distance rates were kept high in support
17 of low local service rates for public policy reasons. The concept of universal service
18 drove this implicit subsidy in toll rates. Toll service was still considered somewhat of
19 a luxury and it made sense, from a policy perspective, to keep these rates artificially
20 high to promote the concept of universal local service. This subsidy was intended to
21 support the Non-Traffic Sensitive (NTS) portion of local service. The NTS portion of
22 local service is the loop, the cost of which does not vary with usage. Switched access
23 rates were developed to keep long distance carriers on equal ground competitively,
24 while maintaining significant support for local service. The easily identifiable
25 implicit subsidy was the CCL charge, but maintaining relatively high rates for other
26 switched access rate elements also supported this concept. The amount of this
27 contribution, above cost, which is higher than might otherwise be reasonable in a
28 competitive market, is a matter of public policy. This higher contribution level
29 helped offset low basic exchange rates.

VII. SWITCHED ACCESS RESTRUCTURE – A
BETTER SOLUTION

Q. WHAT RESTRUCTURE OF SWITCHED ACCESS RATES IS QWEST PROPOSING IN THIS PROCEEDING?

A. Qwest is proposing to further reduce intrastate switched access to the current interstate level on a revenue neutral basis with an equal offset from an ISLC. Current intrastate switched access revenue is approximately \$10.6 M. A reduction to the interstate level would reduce Qwest's intrastate switched access revenues to approximately \$4.5 M, resulting in a \$6.1 M reduction to be offset through a new Intrastate Subscriber Line Charge (ISLC).

In its April 30, 2002 Transition Plan filing, Qwest had proposed to make the same intrastate switched access rate reduction, but with a revenue neutral offset from the Nebraska Universal Service Fund (NUSF), rather than through an ISLC.

Q. WHY IS QWEST AMENDING ITS PROPOSAL AT THIS TIME?

A. Qwest has already removed the clearly identifiable subsidies that were previously collected through intrastate switched access rates (i.e., CCL). Qwest believes that further restructuring of intrastate switched access is necessary to reduce jurisdictional pricing disparity, including the issues associated with such disparity, and to promote rational economic pricing. As the Commission moves further toward a more permanent NUSF plan, the timing is right for Qwest to address what it believes to be the most appropriate way to accomplish further switched access restructuring. For the long term, the proposed access rate reductions are more appropriately recovered through implementation of an ISLC, rather through NUSF support. The NUSF should be used to support lower prices for high cost areas. The ISLC is a flat rate charge attributed to the customer, who is the user of the loop. It is competitively

1 neutral and is sustainable as a long-term method of recovering this support because it
2 recovers costs associated with the service being provided to the ISLC customers.
3

4 **Q. HOW MUCH OF AN ISLC WOULD BE REQUIRED TO OFFSET**
5 **SWITCHED ACCESS REDUCTIONS IN THIS FILING?**

6 A. With this filing, Qwest is proposing an intrastate switched access reduction of
7 approximately \$6.1 M. The reduction should be accomplished by applying Qwest's
8 currently tariffed interstate switched access rates to Qwest's existing intrastate
9 switched access rate structure. Qwest anticipates that the amount of the offsetting
10 ISLC will be approximately \$1.25 per each business and residential access line, per
11 month. Access lines for which eligible subscribers pay reduced charges under the
12 provisions of the Nebraska Lifeline Program should be exempt from application of
13 the ISLC.
14

15 **Q. WHY SHOULD SUCH A RESTRUCTURE BE REVENUE NEUTRAL?**

16 A. The pricing restructure proposed here is largely driven by public policy and the need
17 to establish competitively neutral pricing platforms. As the telecommunications
18 market becomes more and more competitive, it is important to eliminate many of the
19 pricing policies of the past 100 years. This will allow for robust competition without
20 pricing anomalies that confuse customers and generate inefficient investment.
21 Revenue neutrality insures that companies are not penalized for the progressive
22 restructuring of rates that are in the long term best interests of competition and
23 consumers. In theory, this restructure will be revenue neutral to consumers as a
24 whole, so it should also be revenue neutral to Qwest.
25

26 **Q. HAS THE FCC SHIFTED ITS PUBLIC POLICY CONCERNING HIGH**
27 **CONTRIBUTION IN SWITCHED ACCESS RATES?**

28 A. Yes. Over the past several years, the FCC has reduced interstate switched access rates
29 and increased the End User Common Line (EUCL) charge. This has effectively
30 transferred the local service support from switched access rates to the EUCL charge.

1 These charges are flat rate charges applied on a per line basis. This has shifted local
2 service support paid by carriers through switched access rates back to end users,
3 where it should be.
4

5 **Q. IS THE SWITCHED ACCESS RESTRUCTURE PROPOSED BY QWEST IN**
6 **THIS FILING CONSISTENT WITH THIS NEW FCC POLICY?**

7 A. Yes. The intrastate switched access reductions and corresponding revenue neutral
8 offsets proposed by Qwest are consistent with the action and direction of the FCC in
9 its Intercarrier Compensation docket and, specifically, in its *CALLS* Order. Qwest
10 believes that interstate switched access will continue to decline and will eventually go
11 to zero, as the FCC moves closer to a bill and keep regime for all intercarrier
12 compensation². Qwest supports moving to bill and keep and has stated such in its
13 comments filed with the FCC in the Intercarrier Compensation Docket. The FCC
14 completed its initial restructure of interstate switched access in 2000, through
15 implementation of its *CALLS* Order³. Qwest's proposal is completely consistent with
16 that Order. In fact, the FCC recently approved another increase in the federal EUCL
17 to \$6.00 per access line.⁴ With Qwest's proposed additional restructure, Qwest's
18 intrastate switched access rates will move to parity with interstate rates,
19 accomplishing a significant step toward more rational economic pricing for
20 intercarrier compensation.
21

22 **Q. WHAT ARE THE BENEFITS OF RESTRUCTURING SWITCHED ACCESS**
23 **RATES?**

24 A. The five key benefits are that such a restructure will:

² See, provided herewith, "Declaration of William P. Rogerson" dated November 5, 2001.

³ Simply put, the so-called *CALLS* Plan instituted a transitional access restructure for larger ILECs by reducing interstate switched access and implementing an interstate end user subscriber line charge. That shifted revenue recovery from end users through toll charges to end users through flat rated monthly rates. See, *Access Charge Reform, Sixth Report and Order*, 15 FCC Rcd 12962 (2000) ("*CALLS* Order"). A similar transitional plan has been adopted for non-price cap LECs. See *Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, Notice of Proposed Rulemaking*, 16 FCC Rcd 460 (2001).

- 1) Reduce the incentive for uneconomic bypass of the switched network;
- 2) Remove economic penalties for carriers that rate average their toll plans;
- 3) Reduce the confusion to customers who have to deal with many rate plans driven by a wide variety of switched access rates;
- 4) Eliminate toll usage rated support for end-user NTS flat-rated costs; and,
- 5) Eliminate the hidden support that all users of the network pay, but in various and incalculable ways.

Q. WOULD YOU PLEASE EXPLAIN EACH OF THESE PROBLEMS MORE FULLY?

A. Yes.

- 1) Uneconomic bypass often occurs when service providers bypass the switched network with dedicated facilities. These facilities are attractive because switched access rates are relatively high. To the degree that these bypass facilities carry local traffic, they merely represent a competitive alternative. To the degree that they carry toll traffic, they bypass switched access and therefore bypass the support for local service that is built into current rates. The crossover point between paying switched access rates and providing dedicated bypass facilities shifts toward bypass the higher the switched access rates are. These dedicated facilities are typically not used to as great a capacity as they would be if utilized as part of the switched network. This creates wasted capacity and the cost of this waste is borne in one way or another by all ratepayers. In the simplest sense, those bypassing the network (or a portion of it) no longer contribute to the cost of that network and therefore the cost is borne solely by those not bypassing. Lower switched access rates mean that more service providers and customers will utilize the switched network that is more efficient with more use.

- 2) Even though state access rates differ from interstate rates, or differ from state to

⁴ FCC Order released June 5, 2002 in CC Docket No. 96-262, *Cost Review Proceeding for Residential and Single Line Business Subscriber Line Charge (SLC) Caps*.

1 state, or from LEC to LEC, interexchange carriers must price rates to cover costs
2 in the aggregate. This means that if one state or LEC has higher than average
3 switched access rates, the carrier will have to decide whether to create a specific
4 rate plan for that area or accept lower contribution. Specific rate plans cost more
5 to manage and accepting lower contribution is also a form of cost that must be
6 absorbed. In either case, the carrier may choose to withhold some services in that
7 area or create higher priced plans. The customer pays the price for this
8 inefficiency.

- 9
- 10 3) To the degree that carriers choose to address the variety of widely different
11 switched access rate structures with widely different toll rate plans, customer
12 confusion is multiplied. There are enough marketing reasons to create multiple
13 rate plans without adding the complexity of widely different switched access rates
14 to the mix.
- 15
- 16 4) Currently, toll customers are paying more through higher toll rates caused by
17 higher switched access rates than the actual cost of the resources used. Those who
18 use more toll services pay disproportionately more because toll and the underlying
19 switched access rates are driven by minutes of use rather than a flat rate. The
20 underlying cause of these higher rates was driven initially by a usage-based
21 recovery of flat rated NTS costs. A sound economic structure is the basis for a
22 sound competitive environment and the structure will not be sound as long as
23 customers are receiving more or less than they are paying for.
- 24
- 25 5) Since switched access rates are higher than they need to be in a fully competitive
26 environment, carriers will choose to pass on these uneconomic costs in a variety
27 of ways. Since the rates vary from jurisdiction to jurisdiction, different carriers
28 will recover these costs in a variety of ways. Some may charge urban customers
29 more because there is more ability to pay. Some may charge urban customers less
30 because there is more competition. Some may have more rate plans to address

1 these variations. In any case, the cost recovery mechanism is hidden from the
2 ultimate consumer. Because of this, consumers will have a difficult time making
3 sound choices between providers. There are enough differences between
4 providers because of size, service area, and marketing approach already. Adding
5 the complexity of how to recover for higher than necessary switched access costs
6 adds to the fact that these costs are not paid by the cost-causer.

8 9 **VIII. UNIVERSAL SERVICE FUNDS**

10 11 **Q. WHAT IS THE CONCEPT OF UNIVERSAL SERVICE?**

12 A. The concept of universal service is that society benefits as a whole when all citizens
13 have access to reasonably priced telephone service. All customers benefit when they
14 can not only place calls to others, but also receive calls. This typically is most
15 relevant in rural or high cost areas where telephone service is difficult and/or
16 expensive to provision. Traditionally, maintaining high rates for some services such
17 as toll (once considered to be a luxury service) helped to provide cost support for
18 higher cost services in rural or remote areas.

19 20 **Q. WHAT IS THE PURPOSE OF A UNIVERSAL SERVICE FUND?**

21 A. Universal service funds are intended to provide cost support for higher cost service
22 areas such as rural or remote parts of a state. They are aimed at promoting the
23 universal service benefits described above. They are different from the old universal
24 service concept however, in that these funds represent explicit subsidies for universal
25 service. The old concept required hidden or implicit subsidies that are no longer
26 viable or supported by the 1996 Telecom Act. These funds are explicit because their
27 purpose is identifiable, the payments are quantifiable and they are competitively
28 neutral.

1 USF support should not be used to provide cost recovery for all services. The intent
2 of the USF is for all consumers to "have access to telecommunications and
3 information services, including interexchange services and advanced
4 telecommunications and information services, that are reasonably comparable to those
5 services provided in urban areas". Further, these services must be "available at rates
6 that are reasonably comparable to rates charged for similar services in urban areas."⁵
7 USF support should be used to address the disparity of costs across a region, whether
8 the region is national in scope or regional, such as a state. Generally, urban areas are
9 densely populated and consumers have several telecommunications providers with
10 operations that benefit from significant economies of scale. Customers in high cost
11 areas should benefit from the federal and state USF mechanisms that help promote
12 widespread telecommunications.

13
14 **Q. DOES QWEST SUPPORT THE USF CONCEPT?**

15 A. A. Yes. USF support is a very appropriate way to address the disparity in the cost
16 of providing services across a wide region. The density of customers largely drives
17 the economics of providing telecommunication service. USF support is a reasonable
18 way to address these cost disparities and Qwest supports the concept of universal
19 service.

20
21 Universal service support is identifiable, the payments are quantifiable and the
22 support is a competitively neutral method to subsidize the prices of particular
23 customers (i.e. high cost rural customers). This targets the payments to customers
24 who are in need of this subsidy. In this proceeding, however, Qwest is proposing to
25 move the payment for local service costs from the interexchange carrier to the end
26 user who directly benefits from the service being provided, rather than to the NUSF.

27
28 **Q. IS THE SHIFT OF REVENUE FROM SWITCHED ACCESS TO THE NUSF,**

⁵ See the federal statute, Title 47, Section 254 (b) (3)

THE BEST WAY TO ACCOMPLISH REVENUE NEUTRALITY?

A. No, not as a permanent solution. It is not the best way or the most economically sound way to offset such reductions. This method of recovery will become more problematic as the industry continues to evolve toward full competition, with a wide variety of alternatives available to most, if not all, consumers. Since the NUSF is funded by charges on end users, using the NUSF for this purpose merely creates an unnecessary middleman.

Q. WHY SHOULD UNIVERSAL SERVICE FUND SUPPORT NOT BE USED FOR THE OFFSET OF SWITCHED ACCESS REDUCTIONS ON A GOING FORWARD BASIS?

A. The history of higher than otherwise reasonable switched access rates is based on the concept of supporting the non-traffic sensitive (NTS) cost with toll and access services. The NTS cost is primarily the loop and a portion of the end office switch. NTS costs do not vary with usage, so two loops of the same configuration, cost the same regardless of how the customers use them. The USF surcharge in Nebraska is based on revenue. This means that customers who use more telecommunications services and pay more in rates, contribute more into the fund than those who use these services to a lesser degree. While this is a practical way of supporting rural high cost services, it distorts the concept of flat rated support for flat rated loop costs. It means that some customers are paying more to support NTS loop costs, which are flat rated, than other customers. By shifting switched access rates to the USF support, the implicit subsidy for local service has been shifted from carriers to high usage customers. While this is a better, less punitive form of subsidy than higher access rates, it is not the best long-term solution for rationalizing switched access rates.

Q. IF THE NUSF FUNDING WERE FLAT RATED WOULD THE NUSF BE APPROPRIATE FOR THIS PURPOSE?

A. No. Creating a flat rated funding mechanism for the NUSF would certainly address one major problem with using this fund as an offset for reduced switched access rates.

1 If this were done however, passing these funds through the NUSF would become
2 unnecessary. A flat rated charge per access line is what Qwest is proposing with this
3 filing. If such a flat rated charge were established, there would be no need to pass this
4 funding through the NUSF. It would be far more efficient to just allow Qwest, or
5 other local service provider, to collect this charge directly, This is exactly what
6 Qwest is proposing.

7
8 **Q. IS THE NUSF TRANSITION PLAN SUPPORT FOR ACCESS REDUCTIONS**
9 **REASONABLE?**

10 A. Yes. The recovery of switched access rate reductions through the NUSF has made
11 sense, particularly as a temporary measure. This mechanism eliminated subsidies
12 paid by carriers, which was a primary goal and shifted this revenue recovery to all
13 end-users. Because USF support is supported by charges to end users, this is
14 preferable to high rates for carriers that pass them along to consumers in a variety of
15 ways.

16
17 Reducing implicit subsidies in switched access using the NUSF as an offset was an
18 acceptable approach. Now that a permanent NUSF Plan is near, however, it is timely
19 to review the intent of the NUSF and its role in the world of restructured switched
20 access.

21
22 **Q. WHAT HAS CHANGED THAT NOW MAKES THE USF APPROACH A**
23 **POOR CHOICE, GOING FORWARD, FOR SWITCHED ACCESS OFFSETS?**

24 A. The USF still serves a purpose for targeted support to high cost areas, but the use of
25 USF support should be limited to narrowly tailored subsidies, not the broad access
26 reform that is now taking place. The emergence of new telecommunications
27 competitors and technologies point out the frailties of reliance on USF support for
28 such revenues.

29
30 **Q. DOES THE SIZE OF THE USF HAVE AN IMPACT ON ITS VIABILITY?**

1 A. Yes. The larger USF surcharge and support levels grow, the larger will be the
2 contribution by large users. This larger contribution will generate more incentives to
3 find bypassing alternatives and new competitors will find niche technologies to serve
4 these customers. As bypass alternatives emerge, regulators may even be driven to
5 create new rules to insure the fund can support its obligations. This cycle will lead to
6 more regulation instead of allowing the market to regulate itself, which should be the
7 long- term goal of the industry. If USF support remains relatively small and only
8 addresses the fundamental needs of high cost service areas, then there will be less
9 incentive to find ways to avoid contributing to the fund.
10
11

12 IX. TRANSITIONING FROM NUSF TO AN ISLC

13

14 **Q. WOULD IT BE APPROPRIATE TO SHIFT THE CURRENT NUSF SUPPORT**
15 **RESULTING FROM PREVIOUS QWEST INTRASTATE SWITCHED**
16 **ACCESS REDUCTIONS TO THIS NEW ISLC?**

17 A. Yes, Qwest proposes that this transition occur as soon as practicable.
18

19 **Q. HOW WOULD TRANSITIONING PREVIOUS SWITCHED ACCESS**
20 **RESTRUCTURE OFFSETS FROM THE NUSF TO AN ISLC AFFECT THE**
21 **AMOUNT OF THE ISLC BILLED TO END-USERS?**

22 A. Qwest currently has the potential to receive approximately \$20.4 million from the
23 NUSF due to previous intrastate switched access reductions. Shifting this to the
24 ISLC on an average basis would mean an increase from the \$1.25 associated with the
25 current switched access reduction proposal to a total of about \$5.00 per business and
26 residential access line, per month. Customers however, would also see an offsetting
27 decrease in their NUSF surcharges.
28

29 **Q. WOULD THIS AMOUNT EVER HAVE TO CHANGE IN THE FUTURE?**

1 **A.** There are various concepts under consideration by the industry and the FCC, which
2 would fundamentally change how access charges are collected. Qwest has been
3 supporting a bill and keep approach to access charges in the FCC's current docket on
4 intercarrier compensation. How these concepts are developed may have a future
5 impact on this new ISLC, but not to a great significance. After this rate adjustment is
6 made in Nebraska, Qwest will only have \$4.5 million in annual switched access
7 revenues. Due to the emerging competitive landscape, this revenue will not
8 dramatically change year to year and may even decline.

9
10 Additionally, the FCC's *CALLS* plan will remain in effect until 2005. At that time the
11 FCC is expected to have completed its current intercarrier compensation docket and
12 will have a new regime in place. Although future structure is unknown at this time, it
13 will be important to be in step with the FCC, so that future evolution in switched
14 access rates will not create large changes in the future.

15
16 **Q.** **IS QWEST MODIFYING ITS APRIL 30, 2002 TRANSITION PLAN TO**
17 **INCLUDE THIS NEW ISLC PROPOSAL?**

18 **A.** Yes. Qwest is filing an Amended Transition Plan in conjunction with this testimony.
19 Qwest believes it is in the public interest and in the interest of competition that the
20 goal for switched access restructure should eliminate structural discrepancies on a
21 jurisdictional level. As long as that goal is clear, we should move forward as quickly
22 as is reasonable. To that end, it makes sense to establish an ISLC with this filing and
23 commence the process to shift other NUSF support to the ISLC. We are proposing
24 that a better long-term structure for all telephone service in Nebraska is to have an
25 ISLC charged on a per-line basis, rather than recovering these revenues through a
26 NUSF charge leaving the NUSF to focus solely on the more targeted needs of high
27 cost customers. It will be competitively neutral and drive proper economic behavior
28 by both customers and providers of service.

29
30 **Q.** **CAN QWEST LIVE WITH THE STRUCTURE THAT USES THE NUSF AS**

THE SOURCE OF SWITCHED ACCESS OFFSETS?

A. It is certainly preferable to the current structure with high switched access rates and therefore it represents an improvement. It is acceptable as an interim solution if a process for establishing an ISLC is implemented and a schedule for shifting revenues from the NUSF to an ISLC is established. Since a permanent USF plan has not been established, the future of the current mechanism is in some doubt. Qwest believes that the permanent NUSF plan will provide support for providing high cost service, and will not replace the recovery of implicit subsidies in prior switched access charges. As a result, it seems clear that shifting this burden away from the NUSF should begin now.

X. CONCLUSION

Q. PLEASE SUMMARIZE YOUR POSITION ON QWEST'S TRANSITION PLAN FOR SWITCHED ACCESS?

A. To achieve a market-oriented regime, the FCC and Nebraska Commission should work to support policies that move the industry toward lowering intrastate switched access rates to the federal level. With the FCC's completion of an initial restructure of interstate switched access, through implementation of its *CALLS* Order, the timing is right for this Commission to close the jurisdictional gap by taking state switched access to the federally tariffed level.

It is also appropriate to recognize that the FCC has taken significant steps to move support for local services back to the end user in a way that is consistent with cost causation. The FCC has indicated that it will continue with this philosophy in its current and future proceedings as the competitive nature of telecommunications continues to evolve. It is appropriate for the states to follow that lead and not stay too far behind. It will benefit consumers through improved competition based on an

1 economically sound and competitively neutral rate structure.

2

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A. Yes it does.**

5

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE NEBRASKA
PUBLIC SERVICE COMMISSION, ON ITS
OWN MOTION, SEEKING TO
DETERMINE ACCESS COSTS FOR U S
WEST (N/K/A QWEST CORPORATION)

APPLICATION NO. NUSF-17

DIRECT TESTIMONY

JEFFREY H. ROHLFS

ON BEHALF OF QWEST CORPORATION

JUNE 7, 2002

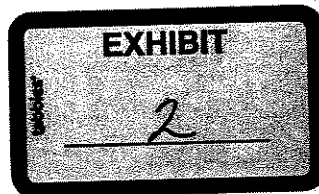


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I. IDENTIFICATION OF WITNESS

Q1. PLEASE STATE YOUR NAME, EMPLOYER AND POSITION.

A1. My name is Jeffrey H. Rohlfs. I am a principal and co-founder of Strategic Policy Research, Inc. ("SPR"), a policy and economic consulting firm located at 7979 Old Georgetown Road, Suite 700, Bethesda, Maryland, 20814.

Q2. PLEASE DESCRIBE YOUR QUALIFICATIONS.

A2. I am an economist specializing in the telecommunications and mass media industries. I received an AB in economics from Amherst College and a PhD from MIT. I have taught business economics at the Stanford Business School. I spent most of my early career at Bell Labs, rising to Department Head of Economic Modeling Research. While at Bell Labs, I wrote a seminal paper on the theory of network externalities. This theory has been widely cited and applied to universal-service policy and technical standards. I also wrote a seminal empirical analysis on optimal telecommunications pricing and rate rebalancing. I recently completed a book, *Bandwagon Effects in High-Technology Industries*, which was published by MIT Press in 2001.

I have been a consultant since 1983 and have consulted on telecommunications and public policy for a variety of clients with regard to ground rules for interconnection pricing, telecommunications competition, cost estimation, regulatory reform, restructuring and privatization in many countries, and policies

1 regarding spectrum and mobile telecommunications. I have substantial inter-
2 national consulting experience, including Australia, Bolivia, Canada, Cape Verde,
3 Dominican Republic, Ecuador, European Union, Germany, Honduras, Hungary,
4 Jamaica, Japan, Latvia, Mexico, New Zealand, Panama, Paraguay, Peru, Puerto
5 Rico, Thailand, Venezuela and the United Kingdom.

6 I have conducted and directed numerous studies on the estimation of costs in the
7 telecommunications industry and the recovery of those costs through pricing.
8 This work has encompassed many variants of both incremental costs and fully
9 distributed costs. It has encompassed both bottom-up and top-down methods of
10 cost estimation.

11 I have made dozens of filings before the Federal Communications Commission.
12 In addition, I testified before state commissions in the District of Columbia,
13 Florida, New Jersey, and Ohio. I served as an expert witness in the United
14 Kingdom and in New Zealand. I have filed expert testimony before the U.S. Tax
15 Court. Additionally, before U.S. District Court, I filed expert testimony that was
16 subsequently cited in favorable decisions by the U.S. Court of Appeals and the
17 U.S. Supreme Court.

18 I have worked on the issue of access reform even before the AT&T divestiture,
19 when the issue was "separations reform." Since then, I have authored numerous
20 publications on intercarrier compensation. I testified before an arbitration panel

1 of the Michigan PSC on behalf of Ameritech regarding intercarrier compensation,
2 and have worked on intercarrier compensation issues in Japan and in Peru (where
3 I examined compensation structures between national long-distance, international
4 long-distance, cellular and rural operators). I am currently consulting with regard
5 to intercarrier compensation for regulatory agencies in the United Kingdom,
6 Jamaica, and the Dominican Republic. My Curriculum Vitae is attached as
7 Exhibit 1 to this testimony.

8
9 **Q3. IS THIS YOUR FIRST APPEARANCE BEFORE THE NEBRASKA**
10 **PUBLIC SERVICE COMMISSION ("NEBRASKA PSC")?**

11 **A3.** Yes, it is.

12
13 **II. PURPOSE OF TESTIMONY**

14 **Q4. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

15 **A4.** My testimony, on behalf of Qwest Corporation ("Qwest"), is to provide economic
16 analysis to support its Revised Transition Plan ("Revised Plan") filed in
17 conjunction with this testimony today. The Revised Plan amends the Transition
18 Plan filed by Qwest on April 30, 2002. In the Revised Plan, Qwest proposes to
19 restructure its rates by introducing an intrastate subscriber line charge ("ISLC") in
20 Nebraska. In addition, Qwest proposes moving the existing \$20.4M in support
21 recovered from the NUSF to the ISLC. I will provide economic support for

1 Qwest's proposed intrastate switched access rates and ISLC, which, combined,
2 will yield a revenue-neutral restructuring of Qwest's current intrastate switched
3 access rates. I will discuss the need for such rate restructuring, including the need
4 to eliminate arbitrage opportunities caused by price disparities. Further, I will
5 discuss the role of the NUSF, why exclusive reliance on the NUSF is harmful, and
6 that restructuring rates to efficient levels is a superior resolution.

7
8 **III. OVERVIEW OF INTERCARRIER COMPENSATION, OF WHICH**
9 **ACCESS IS ONE COMPONENT**

10 **Q5. PLEASE DESCRIBE THE CURRENT SITUATION WITH REGARD TO**
11 **INTERCARRIER COMPENSATION, WHICH INCLUDES INTRASTATE**
12 **ACCESS.**

13 **A5.** Currently, the services of local interconnection, interstate switched access, and
14 intrastate switched access sell for very different prices. Nevertheless, to supply
15 any of these three services, a local exchange carrier ("LEC") provides the same
16 functionality; viz., it carries calls between its own customers and other carriers.
17 From the perspective of the incumbent LEC ("ILEC"), all that differs are the
18 prices of the services and the entities that are qualified to purchase it.

19 This regulatory rate structure contains numerous price disparities that are not cost-
20 based. The prices that other carriers pay (or the in the case of local calls
21 originated by Qwest, the other carriers receive) do not differ because of cost,

1 which is the same for all three services. Rather, the differences derive from the
2 fact that the various prices evolved at different times in different jurisdictions and
3 were designed to further different public-policy objectives.

4 In particular, high access charges are vestiges of the pricing of the pre-divestiture
5 Bell System. In the pre-divestiture period, toll rates far exceeded costs. The
6 contributions from toll services (revenues less incremental costs) were used to
7 recover fixed and common costs of the network. After divestiture, high access
8 charges allowed this rate structure to persist. Initially, the FCC and every single
9 state regulator opted for maintaining high access charges, rather than restructuring
10 rates. However, both federal and state access charges have declined considerably
11 since that time. Nevertheless, intrastate access charges remain high in the Qwest
12 states, where they still typically exceed any reasonable measure of costs.

13
14 **Q6. HOW DO QWEST'S PRICES FOR VARIOUS TYPES OF**
15 **INTERCARRIER COMPENSATION IN NEBRASKA COMPARE?**

16 **A6.** Table 1 below contains Qwest Nebraska's intercarrier compensation rates for
17 switched interstate access, switched intrastate access, and local interconnection at
18 the tandem and at the end office. Each rate is expressed in dollars per minute of
19 use.

Table 1

Current Intercarrier Compensation Rates for Qwest Nebraska			
Interstate Switched Access	Intrastate Switched Access	Local Termination at Qwest's Tandem	Local Termination at Qwest's End Office
\$0.0055	\$ 0.0256	\$0.0045	\$0.00203
Interstate and intrastate switched access rates are the sum of all switched revenues in the switched access category of services. Local termination at Qwest's tandem is calculated as one minute of tandem switching, plus one-minute of transport over 10 miles, plus one minute of local switching at the end office.			

The glaring disparity is that Qwest's intrastate switched access price is over four times the price for interstate switched access. The price for local termination at Qwest's tandem is slightly lower than for interstate switched access service. The occurrence of transport and tandem switching explains the price difference between local termination at the tandem and at the end office. Further, when a Qwest customer originates a local call to a customer served by a CLEC, Qwest pays the other carrier for call termination. Intrastate switched access rates are clearly out of sync with the other sets of intercarrier compensation rates that Qwest charges for traffic originating and/or terminating in its Nebraska service area.

Nonetheless, Nebraska has made considerable progress by eliminating implicit subsidies, such as the intrastate carrier common line charge ("CCLC"). The PSC is to be commended for moving toward efficient rate structures. There is more work, however, to do since, thus far, the NUSF has been exclusively relied upon

1 to compensate for the lost subsidies. I shall discuss later the necessary actions to
2 achieve fully efficient rate structures.

3
4 **Q7. DOES THE CURRENT COLLECTION OF DISPARATE**
5 **INTERCARRIER COMPENSATION RATES SERVE THE PUBLIC**
6 **INTEREST? WHY OR WHY NOT?**

7 **A7.** I contend that the current collection of disparate intercarrier compensation rates,
8 considered as a whole, does not serve the public interest. My reasons are as
9 follows:

- 10 ■ The current rate structure offers myriad opportunities for arbitrage,
11 which diminishes the productivity of the local telecommunications
12 sector. In the long run, the inevitable result of productivity loss is
13 higher ILEC rates. Eventually, arbitrage will cause the regulatory
14 rate structure to collapse (unless regulators redress the problem
15 first);
- 16 ■ The current rate structure undermines the growth of efficient local
17 telecommunications competition; and
- 18 ■ It is completely unsuitable for the future, in which packet
19 technology will play an ever-increasing role.

1 **Q8. WHAT ARBITRAGE OPPORTUNITIES ARISE UNDER THE CURRENT**
2 **DISPARATE INTERCARRIER COMPENSATION RATES?**

3 **A8. Arbitrage opportunities arise in at least four major areas:**

- 4 ■ Focusing on customers that have disproportionately large amounts
- 5 of toll traffic;
- 6 ■ Disguising of calls;
- 7 ■ Growth of wireless telecommunications; and
- 8 ■ Voice over Internet Protocols ("VoIPs").

9 The most important type of arbitrage is simply for CLECs to specialize in serving
10 customers that have disproportionately large amounts of toll traffic. From the
11 ILEC's perspective, those customers are expected to provide sizable contributions
12 (revenues less incremental costs) to help sustain the current rate structure. They
13 can, however, evade paying their share of these contributions to recovering the
14 fixed and common costs of the network by using CLECs for their local service.

15 A CLEC can profitably serve these customers, even if its costs are significantly
16 higher than those of the ILEC. Thus, the effect of the current rate structure is to
17 invite competition that raises costs and lowers productivity of the total local
18 telecommunications sector, encompassing both ILEC and CLECs.

19 The increase in ILEC rates that is likely to result is, in effect, a subsidy from
20 remaining ILEC customers to the CLEC and its customers. That is, the remaining
21 ILEC customers are worse off because the CLEC captured the customer in

1 question. The current rate structure makes the ILEC's remaining customers, in
2 effect, involuntary parties to the transaction between the CLEC and its customer.

3 If the CLEC has higher costs than the ILEC, the losses to ILEC customers exceed
4 the gains to the CLEC and its customers. The difference is the aggregate loss of
5 productivity to the local telecommunications sector.

6 Of course, it is possible that the CLEC is *more* efficient than the ILEC. The
7 CLEC may have a state-of-the-art fiber-optic network. It may also be able to
8 enjoy economies of scope by supplying local telephone service, together with
9 long-distance service and/or broadband Internet access. Even in this case,
10 however, the current rate structure still leads to a subsidy from ILEC ratepayers to
11 the CLEC and its ratepayers. Furthermore, if the CLEC is efficient, the subsidy is
12 completely unnecessary. The CLEC would have the incentive to enter on the
13 basis of its superior efficiency, even in the absence of a subsidy.

14 This type of arbitrage can be expected to grow rapidly over the next several years.
15 A great deal of capacity has already been deployed and is available to provide
16 service to business customers who have disproportionately large toll usage. For
17 example, among the companies that offer facilities-based services in Nebraska is
18 Cox Communications. Through its Cox Business Services, Cox Communications
19 supplies local and long distance telephone, high-speed Internet access, data
20 transport, and video solutions over a "state-of-the-art fiber-optic-based broadband

1 network," in Omaha.¹ Cox has deployed telecommunications networks in 20
2 states, including Nebraska and Arizona. Another facilities-based competitor in
3 Nebraska is Covad Communications. Covad has recently emerged from Chapter
4 11 Bankruptcy and continues to provide business services in the areas of Nebraska
5 served by ALLTEL and Qwest² and 94 of the top Metropolitan Statistical Areas
6 ("MSAs") across the United States.³ Though a number of CLECs did not fare
7 well in the recent recession, their facilities remain in place, and other carriers have
8 acquired some of their assets or they have emerged from bankruptcy without the
9 load of debt they had been carrying. The fiber deployed by these CLECs and
10 others will support substantial growth without the need for much additional
11 infrastructure investment.

12
13 **Q9. PLEASE ELABORATE ON THE OTHER FORMS OF ARBITRAGE.**

14 **A9.** The existing rate structure also invites other forms of arbitrage, as discussed
15 above. In particular, the ILEC often cannot determine whether a call is local,
16 intrastate or interstate; *e.g.*, if the customer uses a dedicated link to an IXC for
17 both local and long-distance calls. Thus, customers and other carriers have the

¹ Downloaded from www.coxbusiness.com/systems/ne_omaha (obtained June 5, 2002)

² Nebraska Public Service Commission, *Annual Report to the Legislature on the Status of the Nebraska Telecommunications Industry* (September 28, 2001) at 15.

³ Downloaded from <http://www.covad.com/companyinfo/history.shtml> (obtained June 5, 2002).

1 incentive and ability to disguise toll calls as local calls. By doing so, the other
2 carrier can benefit from the favorable terms of local interconnection—including
3 being paid for terminating calls. It can evade paying carrier access. The cost
4 savings (incentives for evasion) are especially great for intrastate access charges in
5 the Qwest states.

6 It is hard to tell how much disguising of calls actually occurs, because the
7 perpetrators try to conceal it. In any event, it is obvious that CLECs have the
8 ability and incentive to disguise some calls. It would therefore be folly to assume
9 in the absence of empirical evidence that the practice is small or insignificant.

10 I believe that if restructuring is going to take a long time to complete, regulators
11 should periodically audit CLECs. If they find that a CLEC has reduced its access
12 payments by disguising calls, sufficiently large fines should be levied to make the
13 practice unprofitable. That is, the amount of the fine times the probability of
14 getting caught should exceed the savings from disguising calls. If a CLEC is
15 found to have a sustained and systematic practice of disguising calls, its certificate
16 should be revoked. The current rate structure is difficult enough to sustain
17 without its additionally depending on an unenforced "honor system."

18 Of course, this high degree of regulatory intervention is far from ideal. A much
19 better solution is to fix the problem by rationalizing the rate structure. With a
20 rational rate structure, payments of CLECs and IXC's would depend on the

1 activities that the ILEC performs on their behalf—not on what they report on the
2 honor system in the different jurisdictions.

3 The current rate structure also affords artificial incentives for customers to use
4 mobile (or other wireless) services to make toll calls. Mobile carriers obtain
5 connection to the ILEC network through local interconnection rates agreed to
6 under the terms of Section 251. This pricing scheme enables mobile carriers to
7 originate and terminate long-distance calls to/from ILEC customers within a broad
8 service area (that may span many ILEC local calling areas) on favorable terms—
9 including being paid for terminating calls. The same long-distance calls over a
10 wireline network would, however, be subject to carrier access charges.

11 This arbitrage will continue to grow as the wireless industry grows, and the
12 wireless industry is growing very rapidly. According to CTIA, usage on cellular
13 phones is increasing 75 percent every year.⁴ Further, the Yankee Group has
14 estimated that by 2006, there will be close to 100 million wireless data users.⁵

15 That is, the number of wireless users will be approximately 44 percent of the

⁴ Yuki Noguchi, "More Cell-Phone Users Cut Ties to Traditional Service," *The Washington Post* (December 28, 2001) from www.washtech.com.

⁵ "Wireless Pricing Bytes, According to the Yankee Group," Yankee Group Press Release (October 24, 2001). Further, they have estimated that about 26 percent of all wireless users (17 percent of the total U.S. population) will use wireless devices to purchase premium content and authorize the purchase of goods. ["The Yankee Group Publishes U.S. Mobile Commerce Forecast," Yankee Group Press Release (October 31, 2001).]

1 number of wireline access lines.⁶ Some of these wireless telephones will actually
2 displace wireline access lines.

3 Finally, many customers of all sizes, from large corporations to the single-line
4 residential customer, are starting to use their computers and Internet connections
5 to make voice calls using VoIP. The quality of service of VoIP for calls carried
6 over the Internet is generally significantly lower than those carried on traditional
7 circuit-switched networks. It is, however, possible for carriers that specialize in
8 VoIP to use their own facilities for long-haul transmission and offer quality equal
9 to traditional circuit-switched voice telecommunications. As VoIP grows—and
10 that growth is inevitable—the current pricing regime will become increasingly
11 difficult to sustain. VoIP traffic appears to be local traffic, as the user calls his
12 local ISP. The caller, however, could be conversing with a person in another town
13 or even in another state or country. Thus, a long-distance call is disguised as a
14 local call for billing purposes.

15 This threat is more than mere potential. Today, about 5 percent of Internet users
16 worldwide are using their computers to make voice phone calls. Ovum estimates
17 that that will increase to 23 percent by 2006.⁷ About \$3 billion of U.S. telephone

⁶ SPR estimates that there will be approximately 229 million access lines in the U.S. in 2006, using a conservative annual growth rate of 3 percent applied to the 1999 access line count of 186 million reported in the FCC's *Trends in Telecommunications*, at Table 8.1 (August 1, 2001).

⁷ Ovum estimate, 2000. From www.cisco.com, "Facts and Stats" page (downloaded January 29, 2002). Cisco estimates that worldwide VOIP was under \$1 billion in 1999 and will increase to about \$8 billion by 2004. Similarly, other IP communications, voice-enabled e-commerce and enhanced services, are expected (continued)

1 company revenues with shift over to VoIP by the end of 2004, according to
2 Forrester Research, Inc.⁸ The adoption rate of VoIP in large U.S. businesses
3 increased from 5 percent to 19 percent over a six-month period in 2001. Similarly
4 for small and medium organizations, the adoption rate increased from 7 to 13
5 percent over the same six-month period in 2001.⁹

6
7 **Q10. WHAT EVENTUALLY WOULD YOU PREDICT TO BE THE RESULT**
8 **OF THIS ARBITRAGE?**

9 **A10.** The effect of all the types of arbitrage described above is that the disparate rate
10 structure will ultimately collapse. Sophisticated consumers and their
11 interexchange carriers are finding more and more ways to use new technology to
12 evade paying access charges, which support the current rate structure. All the
13 types of arbitrage that I described are growing rapidly. As fewer and fewer
14 ratepayers pay for access charges, the rates paid by each remaining user for ILEC
15 services must increase if the ILEC is to cover its total cost and have the ability and
16 incentive to make infrastructure investments. Eventually, the users who were

to generate collectively about \$10 billion dollars worldwide. [Mike Volpi, Chief Strategy Officer, Cisco, Systems, "Voice-over-IP: A Tornado Market" (March 27, 2001).]

⁸ Forrester Research, 2000, from www.cisco.com (downloaded January 29, 2002).

⁹ "The Future of VOIP," posted on www.voipwatch.com (October 25, 2001).

1 supposed to pay low rates will pay more than they would have in the absence of
2 the failed rate structure.

3 The dynamic described in the above paragraph seems inevitable. The economic
4 harms from *not* rationalizing intrastate prices will grow rapidly over time.
5 Eventually, regulators will have no reasonable alternative to rationalizing the rate
6 structure.

7 The dislocations that will be caused by the inevitable collapse of the rate structure
8 will grow over time. Until the problem is fixed, CLECs will respond to incentives
9 and become more and more entrenched in arbitrage operations. When rates are
10 ultimately restructured, much of the investment that CLECs made to utilize
11 arbitrage may become unproductive. Some CLECs may even fail. These
12 problems can be minimized by beginning the restructuring process now. It is
13 important for regulators to send a credible market signal that a rationalized rate
14 structure is on the way. To be credible, the signal should consist of a specific
15 long-term plan plus some significant immediate progress.

16

17 **Q11. WHAT ARE THE CONSEQUENCES OF THE CURRENT RATE**
18 **STRUCTURE FOR THE GROWTH OF EFFICIENT FACILITIES-BASED**
19 **LOCAL TELECOMMUNICATIONS COMPETITION?**

20 **A11.** The current rate structure undermines the growth of efficient facilities-based local
21 telecommunications competition. Large business customers are attractive

1 customers for CLECs under the current rate structure. They can often be
2 efficiently served with fiber-optic technology, because they are in dense business
3 areas, or sometimes because a single end-user location is enormous, in itself. In
4 addition, large business users are likely to have a disproportionately large amount
5 of toll traffic and support the arbitrage, described above.

6 Many large business customers would be attractive customers, even if rates were
7 restructured. They could still often be efficiently served with fiber-optic
8 technology. The amount of toll traffic would, however, be much less relevant.
9 Thus, CLECs could also profitably focus their marketing efforts on firms (e.g.,
10 real-estate firms) whose community of interest is largely local.

11 More importantly, restructuring rates would make it much easier for CLECs to
12 compete for residential customers. For example, wireline CLECs could use some
13 combination of fiber optics, coaxial cable, and copper wire to offer a combination
14 of telephone service, broadband Internet access, and cable television. Such
15 competition would be very constructive. Not only would it provide competition
16 for telephone and broadband Internet service, but it would also undermine the
17 monopoly position of cable television companies, to the benefit of their
18 customers. The only problem with this form of competition is that it is not
19 occurring on any significant scale.

20 In *Silver Blaze*, Sherlock Holmes identified the killer on the basis of the dog that
21 did not bark. In this case, we can identify the regulatory market distortion from

1 the killer application that did not appear in the market. The economics of offering
2 residential telephone service to compete with the ILEC are simply not very
3 attractive under the current rate structure.
4

5 **Q12. HOW CAN THESE PROBLEMS BE AVOIDED OR MITIGATED?**

6 **A12.** Regulated ILEC rates must be rationalized if these problems are to be avoided and
7 the full benefits of local telecommunications competition are to be realized. As
8 Table 1 above, illustrates, first and foremost, switched access charges must be
9 lowered. Such reductions would, taken by themselves, weaken the ability and
10 incentive of ILECs to make infrastructure investments (especially those required
11 to deploy the packet-switched technology that is demanded by today's growing
12 data and Internet applications). If this undesirable outcome is to be averted,
13 regulators must afford ILECs the opportunity to earn compensatory revenues from
14 other services, *e.g.*, through revenue-neutral rate restructuring. As switched
15 access rates are lowered, offsetting revenues could come from the creation of an
16 ISLC. I will discuss these issues further with regard to the Amended Transition
17 Plan filed in this proceeding.
18

19 **Q13. WHAT LESSONS FOR EFFICIENT PRICING CAN BE LEARNED FROM**
20 **THE HISTORY OF THE TELECOMMUNICATIONS INDUSTRY OR**
21 **OTHER INDUSTRIES?**

1 **A13.** The key lesson, which has been borne out in the history of telecommunications as
2 well as in other industries, is that socially engineered pricing regimes are
3 unsustainable and counterproductive upon opening the industry to competition.
4 When regulators decide to allow and promote competition in a regulated industry,
5 they should move toward a market-based pricing structure as quickly as
6 practicable. In such a structure, prices in competitive markets only slightly exceed
7 incremental costs; additionally, the regulated firm is afforded the opportunity to
8 recover its total costs. Experience has shown that the costs of not pricing in this
9 manner can be enormous.

10 The history of the transportation industry offers a splendid example of how large
11 those costs can be.¹⁰ During the early period of monopoly, the railroads had a rate
12 structure with higher rates for transport of more valuable (primarily manufactured)
13 goods and lower rates for lower-value (primarily agricultural) goods. This "value
14 of service" approach worked satisfactorily during the monopoly period but
15 became unsustainable in the face of competition by common-carrier trucking.
16 Because of competition, continuing to charge high prices for transport of
17 manufactured goods was counterproductive. It simply resulted in losing the
18 business to trucking competition.

¹⁰ A critique of the regulation of the railroad is contained in John R. Meyer, Merton J. Peck, John Stenason and Charles Zwick, *The Economics of Competition in the Transportation Industries* (Cambridge: Harvard University Press, 1959).

1 The pricing policy that was called for is as follows:

- 2 ■ Lower prices for transport of high-value goods so as to be competi-
3 tive with trucks but still cover incremental costs; and
- 4 ■ Raise prices for transport of low-value goods sufficiently to afford
5 the railroad the opportunity to recover its total costs, including the
6 fixed costs of the roadbed.

7 Had the Interstate Commerce Commission ("ICC"), which regulated railroad
8 rates, followed this pricing policy, most railroads would probably have remained
9 viable.

10 In reality, the ICC continued its obsolete policy of value-of-service pricing until
11 Congress legalized market-based pricing in 1980 with the Staggers Act. In the
12 meantime, the revenue base of the railroads continually eroded, as they lost more
13 and more business to competition. As a result, the railroads suffered varying
14 degrees of financial distress, and many went bankrupt before the Staggers Act was
15 passed. Lastly, as a result of mis-regulation, the U.S. railroad industry devolved,
16 over a period of several decades, from one of the premier industries of America to
17 an international disgrace.

18 The history of the airline industry offers similar lessons. The Civil Aeronautics
19 Board ("CAB"), established in 1938, had regulatory authority over interstate
20 airline services. Its policy was to keep fares in high-density long-haul markets

1 above cost and fares in low-density short-haul markets below costs.¹¹ Airlines
2 could not charge less in dense markets. They could, however, add services and
3 flights (decreasing the percentage of seats filled), both of which drove up costs
4 and led to continual price increases.

5 The poor performance of the airline industry under regulation eventually led to the
6 Airline Deregulation Act in 1978, which abolished the CAB effective year-end
7 1984. As a result of deregulation, travelers (especially tourists) have benefited
8 from lower prices on major routes. At the same time, efficient competition, using
9 small planes, has been attracted to less-dense markets.

10 This history of telecommunications with regard to this issue is still unfolding. At
11 the time when the AT&T divestiture was announced, the telecommunications rate
12 structure had been socially engineered to an extreme degree. It did not even
13 remotely resemble a market-based pricing structure.

14 At this point the history of telecommunications diverged sharply from that of
15 railroad or airlines. The FCC, unlike the pre-deregulation ICC and CAB,
16 recognized the problem and took preventive measures. These included reform of
17 the Division of Revenues (or Separations) process and the imposition of SLCs.

¹¹ *Regulatory Reform: What Actually Happened*, L. Weiss and M. Klass, eds. (Little, Brown & Company: 1986) at 43.

1 As a result of these policies, telecommunications prices moved much closer to
2 market-based levels.

3 Even now, however, eighteen years after the AT&T divestiture, telecom-
4 munications prices still deviate substantially from market-based rates. At the
5 same time, the CLEC industry is poised for rapid growth. It will assuredly exploit
6 whatever arbitrage opportunities are offered by the existing rate structure. It
7 remains to be seen whether telecommunications regulators will rise to the
8 challenge and take the further steps necessary to achieve a market-based rate
9 structure. If they do not, I would expect telecommunications to experience serious
10 setbacks, similar to those of the pre-deregulation railroad and airline industries.

11
12 **IV. RESTRUCTURING SWITCHED ACCESS RATES IN NEBRASKA**

13 **Q14. EARLIER YOU STATED THAT NEBRASKA HAS MADE PROGRESS IN**
14 **REDUCING SUBSIDIES. WHAT STEPS HAS THE NEBRASKA PSC**
15 **TAKEN IN THIS REGARD?**

16 **A14.** Since 1999, Nebraska has been working on a transition plan in which switched
17 access rates have been progressively reduced and the CCLC has been eliminated.
18 Such rate elements have historically provided large contributions, relative to those
19 of local services, toward the recovery of the fixed and common costs of the
20 network.

1

2 **Q15. IF NEBRASKA HAS ELIMINATED IMPLICIT SUBSIDIES, WHY ARE**
3 **FURTHER ACTIONS NECESSARY?**

4 **A15.** Though implicit subsidies have been eliminated, two problems remain: excessive
5 reliance on the NUSF and continued opportunities for arbitrage under current
6 disparities of interstate and intrastate switched access rates. Although implicit
7 subsidies have since been replaced by explicit contribution from the NUSF, costs
8 are still not borne by the cost causer. For this reason, ISLCs are more efficient
9 than total reliance on the NUSF. Further, the current high levels of intrastate
10 switched access rates continue to encourage unproductive arbitrage.

11

12 **Q16. WHAT ARE THE BENEFITS OF QWEST'S PROPOSAL TO**
13 **RESTRUCTURE RATES BY INTRODUCING AN ISLC IN NEBRASKA?**

14 **A16.** The benefits of Qwest's proposal to restructure rates by introducing an ISLC to
15 balance the switched access reduction are many. First, reducing switched access
16 rates to the interstate level eliminates a significant opportunity for arbitrage by
17 long-distance carriers by disguising intrastate traffic as interstate. As I showed
18 above, Qwest's intrastate switched access rates are more than four times the
19 interstate level. Second, economic efficiency is maximized by restructuring rates
20 to their efficient levels and having the cost causer pay for the costs that he or she
21 causes. Exclusive reliance on the NUSF neither meets this objective of efficiency

1 nor accords with the principles of cost causation. In contrast, flat per-line charges
2 are an economically efficient mechanism for recovering costs that are not traffic
3 sensitive.

4 The total reliance on NUSF funds to replace eliminated subsidies is an inadequate
5 solution in the long run. Further progress should be made in recovering non-
6 traffic sensitive costs from flat-rate charges. Qwest's proposed ISLC for
7 Nebraska will lead to further gains in promoting efficient competition and
8 avoiding inviting unproductive arbitrage. Initially, Qwest proposes only to offset
9 the pending reduction in intrastate access through the ISLC. Yet, as soon as is
10 practicable, an ISLC or some flat-rate charge should be implemented to replace
11 current reliance on the NUSF. This is the most efficient resolution to inefficient
12 rate structures.

13
14 **Q17. YOU STATED IN YOUR PREVIOUS RESPONSE THAT RELIANCE ON**
15 **THE ISLC OR SOME FLAT-RATE CHARGE IS MOST EFFICIENT.**
16 **WHAT ARE THE CONSEQUENCES OF CONTINUING TO RELY**
17 **EXCLUSIVELY ON THE NUSF FOR THE PENDING RATE**
18 **REDUCTIONS AS WELL AS FOR THE ENTIRETY OF IMPLICIT**
19 **SUBSIDIES?**

20 **A17.** As I discussed earlier, continued reliance on the NUSF places a burden on
21 carriers, and, thus, customers, who are not responsible for causing the costs. In

1 this proceeding, Qwest is proposing to introduce an ISLC of \$1.25 that its own
2 customers will be paying. Other carriers and their customers in Nebraska will not
3 be responsible for this fee. Further, if Qwest is permitted to recover all of the
4 previously removed implicit subsidies (about \$20.4 million), that amount plus the
5 amount pending would result in a relatively modest ISLC of approximately \$5.00
6 per line per month. The full reliance on an ISLC should occur sooner rather than
7 later. The result will be greater economic efficiency in telecommunications
8 markets.

9
10 **Q18. IF ISLCs REPLACE NUSF FUNDING, WHAT WILL BE THE ROLE OF**
11 **THE NUSF?**

12 **A18.** The NUSF will continue to provide support to enable the deployment and
13 maintenance of local telephone networks in areas deemed to be high cost; that is,
14 in geographic areas where the cost to develop and maintain local telephone
15 networks is so prohibitive that service would not be affordable without subsidies.
16 The availability of funds from sources such as the NUSF, the federal USF or
17 Rural Utilities Service (formerly, Rural Electrification Administration), makes
18 service affordable in these areas.

19
20 **Q19. HOW DO ISLC CHARGES REFLECT CHANGES IN SWITCHING**
21 **TECHNOLOGY AND COSTS?**

1 **A19.** ISLC charges reflect changes in switching technology and costs very well. The
2 nature of switching costs has changed significantly over time with advances in
3 digital technology. Switching costs today are more line-driven than traffic-
4 sensitive. It is not unreasonable to model switching costs now as depending
5 entirely on the number of line-side ports and the number of trunk-side ports.
6 Switching costs in such a model can be reasonably recovered entirely as fixed
7 monthly charges. (From the perspective of a carrier or large end user, however,
8 the costs may be traffic-sensitive, because additional traffic may require the use of
9 more trunks or lines, respectively.) The proposed changes in Qwest's switched
10 access rates and the introduction of, and eventual full reliance on, an ISLC are
11 precisely the rate design that reflects the changes that have occurred in switching
12 costs over the years.

13
14 **Q20. WHAT ARE THE UNIVERSAL-SERVICE IMPLICATIONS OF**
15 **QWEST'S PROPOSING A PER-LINE ISLC CHARGE AS PART OF ITS**
16 **REVENUE-NEUTRAL RATE RESTRUCTURING?**

17 **A20.** Universal-service objectives have been achieved for all intents and purposes for
18 decades. Since 1970—over 30 years ago—more than 90 percent of U.S.
19 households have been connected to the telecommunications network.¹² In

¹² FCC, Common Carrier Bureau, "Trends in Telephone Service" (August 2001) at Table 17.5.

1 Nebraska, the household penetration rate exceeded 94 percent in 1983 and is
2 above 96 percent (as of July 2001).¹³ The modest ISLC proposed by Qwest would
3 not at all jeopardize universal service.

4
5 **Q21. IN THE LONG TERM, WHAT SHOULD BE THE POLICY OBJECTIVE**
6 **OF THE NEBRASKA PSC REGARDING CARRIER ACCESS AND**
7 **OTHER INTERCARRIER COMPENSATION?**

8 **A21.** Over the long term, the Nebraska PSC's public-policy goal should be to have a
9 single set of rates for intrastate access, interstate access, and local interconnection.
10 These rates all apply to the same function of carrying calls between the ILEC's
11 customers and other carriers. All that differs today is the price and the entities
12 that qualify to purchase the service. Multiple prices for the same functionality are
13 always an open invitation to arbitrage.

14 The FCC has announced its intention to reconcile local interconnection and
15 interstate access after the current CALLS plan expires in 2005. I believe that state
16 regulators should be making progress in that direction, as well.

17 In particular, I believe that the Nebraska Commission should move quickly to
18 restructure intrastate switched access charges to the interstate level and implement
19 a ISLC of approximately \$1.25 as proposed by Qwest. The two sets of access

¹³ FCC, Wireline Competition Bureau, "Trends in Telephone Service" (May 2002) at Table 17.2.

1 charges will then be in harmony (and not susceptible to arbitrage between them)
2 through 2005. Mirroring interstate access charges will be a constructive step,
3 irrespective of what the FCC decides with respect to intercarrier compensation for
4 local calls.

5 In the intermediate term, Qwest's proposal to recover implicit subsidies from an
6 ISLC rather than the NUSF is an important and vital step toward economically
7 efficient rates. An ISLC of approximately \$5.00 per month would not jeopardize
8 universal service in Nebraska.

9 For the long term, the FCC is contemplating adopting some form of bill-and-keep
10 for interstate access—an approach supported by Qwest. Nevertheless, the
11 Nebraska PSC need not rush to moving intrastate switched access rates to a bill-
12 and-keep system until the FCC implements it. At that point, however, to delay to
13 implement bill-and-keep would invite further arbitrage, a return to the current
14 situation.

15
16 **V. CONCLUSION**

17 **Q22. DOES THIS CONCLUDE YOUR TESTIMONY?**

18 **A22.** Yes, it does.

CURRICULUM VITAE

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Dr. Rohlfs is a founding principal of Strategic Policy Research, Inc. ("SPR") and has been a consultant since 1983. He is an economist who specializes in the telecommunications and mass media industries. He has numerous publications, including theoretical, empirical and policy analyses.

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Prior to his career in consulting, Dr. Rohlfs spent 14 years at Bell Labs, rising to Department Head of Economic Modeling Research. While at Bell Labs, Dr. Rohlfs wrote a seminal paper on the theory of network externalities. This theory has been widely cited and applied to universal-service policy and technical standards. Dr. Rohlfs also wrote a seminal empirical analysis on optimal telecommunications pricing and rate rebalancing.

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Advisor to CONATEL (regulatory authority in Venezuela), 2000-2001.

Advisor to OSIPTEL (Peruvian telecommunications regulator), 1996-2000.

Advisor to Office of Utilities Regulation ("OUR"), Jamaica, W.I., on establishing a regulatory framework for the telecommunications sector, 1996-2001.

Advisor to Comisión Nacional de Telecomunicaciones—CONATEL (regulatory authority in Paraguay), 1999-2000.

Advisor to CONAM (regulatory authority in Ecuador), 1999-2000.

Advisor to Comisión Nacional de Telecomunicaciones—CONATEL (regulatory authority in Honduras), on drafting service-specific regulations for telecommunications services, 1998.

Advisor to City of San Diego, California, with regard to negotiations involving spectrum licenses, 1996.

Advisor to *Secretaria de Comunicaciones y Transportes* (Mexican telecommunications regulator) under the auspices of the World Bank and Inter-American Development Bank, 1989-1990.

Advisor to the New Zealand Treasury and Ministry of Commerce with regard to the privatization of Telecom New Zealand, 1989.